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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,292	05/03/2000	ULRICH KLAR	SCH1742	1743

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EXAMINER

ROBINSON, BINTA M

ART UNIT

PAPER NUMBER

1625

DATE MAILED: 05/27/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/485,292

Applicant(s)

KLAR ET AL.

Examiner

Binta M. Robinson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 14-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

The restriction requirement made at paper no. 13 is made FINAL.

The rejection of claim 11 under 35 U. S. C. 101 and 112, second paragraph rejection, the rejection of claims, the rejection of claims 1-12 under 35 U. S. C. 102 (b), the rejection of claims 1-12 are rendered moot as a result of applicant's amendment at paper no. 15/B.

(Old Rejections)

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13 is rejected under 35 U.S.C. 112, first paragraph, because the specification, does not provide enablement for R1a, R1b, R2a, R2b, R4a, R4b, R5, R8, R10, and R11 equal to all aryl, C7-C20 aralkyl groups which according to the specification can encompass heterocyclic groups. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The claims as recited are broader than the scope of enablement. The specification lacks direction or guidance for placing all of the alleged products in the possession of the public without inviting more than routine experimentation. The applicant is referred to *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988) which

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includes the incorporation of the 8 factors recited in *Ex parte* Foreman 230 USPQ 546 (Bd. Of App. And Inter 1986).

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art 6) the amount of direction provided by the inventor 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In *re Wands*, 858 F. 2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

In terms of the breadth of the claims, R1a, R1b, R2a, R2b, R4a, R4b, R5, R8, R10, R11 encompasses a much wider Markush grouping of radicals than those radicals synthesized. In terms of the second Wands factor, these products are useful as antitumour agents. In terms of the fifth Wands factor, the level of predictability in the art is low because the applicant does not test any of these compounds for their pharmaceutical effects. In terms of the sixth Wands factor, the amount of direction provided by the inventor is poor, because the applicant does not test any of these compounds for their pharmaceutical effects nor does the applicant synthesize compounds where R1a, R1b, R2a, R2b, R4a, R4b, R5, R8, R10, R11 encompass the full breadth of the aryl or aralkyl moieties claimed. In terms of the seventh Wands factor, the applicant does not provide any working examples. In terms of the 8th Wands

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factors, undue experimentation would be required to make or use the invention based on the content of the disclosure due to the breadth of the claims, the level of predictability in the art of the invention, and the poor amount of direction provided by the inventor. Taking the above factors into consideration, it is not seen where the instant claim is enabled by the instant application.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim(s) 2-7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. In claim 2-7, , the phrase "the remainder of the molecule is identical to naturally occurring epothilone A or B" is indefinite. It is unclear as to how the remainder of the molecule is identical to the naturally occurring epothilone A or B.

B. In claim 12, page 298, lines 23-24, the phrase "including all stereoisomers and mixtures thereof" is indefinite since it is unclear as to whether or not the applicant intends to claim the production of "a compound" or "a pharmaceutical composition."

(new rejections)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U. S. C. 103(a) as being unpatentable over CA 132:293587r. (See Reference U). CA 132:293587r teaches the instant compound, compound IV. At page 674, see the instant compound IV.

The difference between the prior art compound and the instantly claimed compound are the alkyl groups at the R2a and R2b positions. In the instant compound, the R2a and R2b groups are ethyl. In the prior art compound, the R2a and R2b groups are methyl. The prior art compound and the instant compound are homologues of each other. Homologues are compounds that differ by a methylene linkage.

It would have been obvious to one of ordinary skill in the art to synthesize homologues of this class of compounds. For example, see compound IV at page 674. Accordingly, the compounds are deemed unpatentable therefrom in the absence of a showing of unexpected results for the claimed compounds over those of the generic prior art compounds.

Claims 1-12 are rejected under 35 U. S. C. 103(a) as being unpatentable over Nicolaou et. al.. (See Reference V). Nicolaou teaches the instant compound, , compound oxacylohexacec-13-ene-2,6-dione, 4-8-dihydroxy-5,5,7,9,13-pentamethyl-16-[(1E)-1-methyl-2-(2-methyl-4-oxazolyl)ethenyl]-, (4S, 7R, 8S, 9S, 13Z, 16S). At pages 1971-1986., see compound oxacylohexacec-13-ene-2,6-dione, 4-8-dihydroxy-5,5,7,9,13-pentamethyl-16-[(1E)-1-methyl-2-(2-methyl-4-oxazolyl)ethenyl]-, (4S, 7R, 8S, 9S, 13Z, 16S).

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The difference between the prior art compound and the instantly claimed compound are the alkyl groups at the R2a and R2b positions. In the instant compound, the R2a and R2b groups are ethyl. In the prior art compound, the R2a and R2b groups are methyl. The prior art compound and the instant compound are homologues of each other. Homologues are compounds that differ by a methylene linkage.


It would have been obvious to one of ordinary skill in the art to synthesize homologues of this class of compounds. For example, see compoundoxacylohexacec-13-ene-2,6-dione, 4-8-dihydroxy-5,5,7,9,13-pentamethyl-16-[(1E)-1-methyl-2-(2-methyl-4-oxazolyl)ethenyl]-, (4S, 7R, 8S, 9S, 13Z, 16S). At pages 1971-1986. Accordingly, the compounds are deemed unpatentable therefrom in the absence of a showing of unexpected results for the claimed compounds over those of the generic prior art compounds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binta M. Robinson whose telephone number is (703) 306-5437. The examiner can normally be reached on M-F (9:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alan Rotman can be reached on (703)308-4698. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7922 for regular communications and (703)308-7922 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0193.


5/16/03


ALAN L. ROTMAN
SUPERVISORY PATENT EXAMINER
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